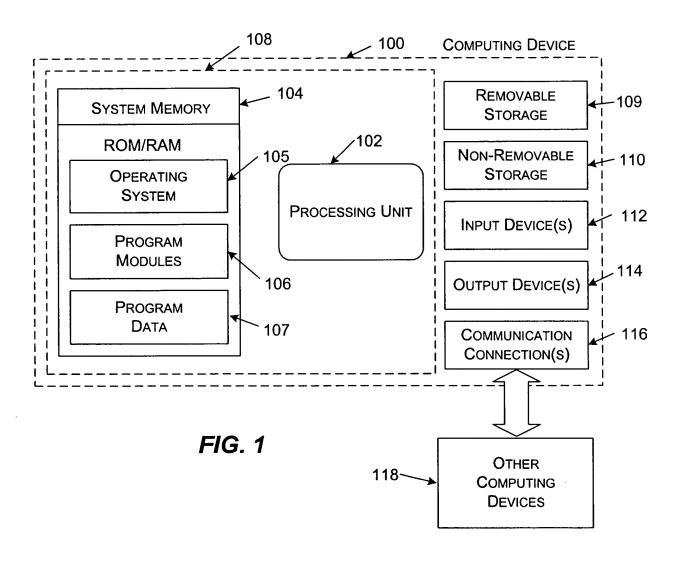
Title: SYSTEM AND METHOD FOR USING DATA ADDRESS SEQUENCES OF A OGRAM IN A SOFTWARE DEVELOPMENT TOOL

omey Name: John S. Jardine

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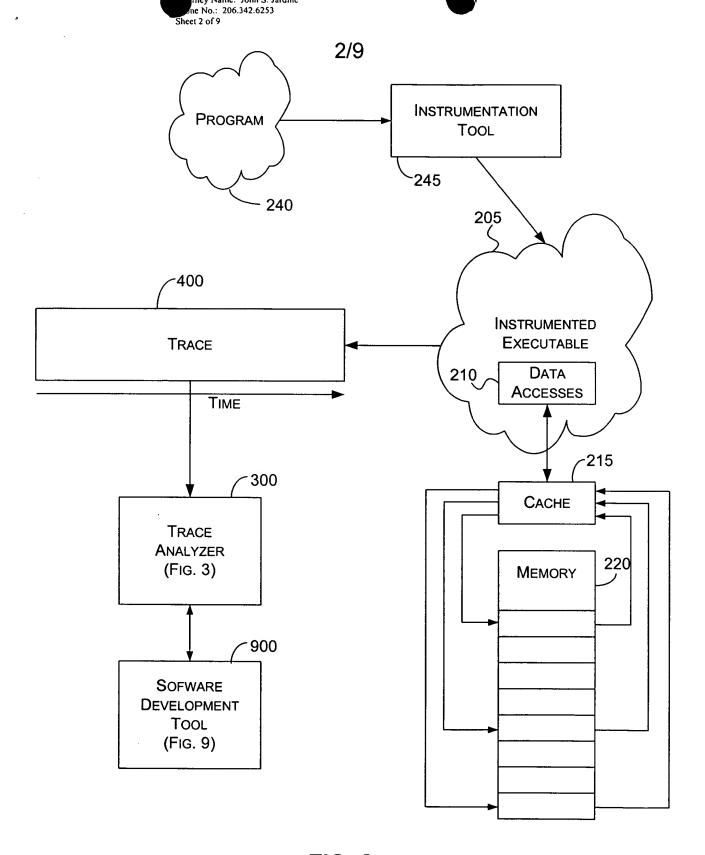
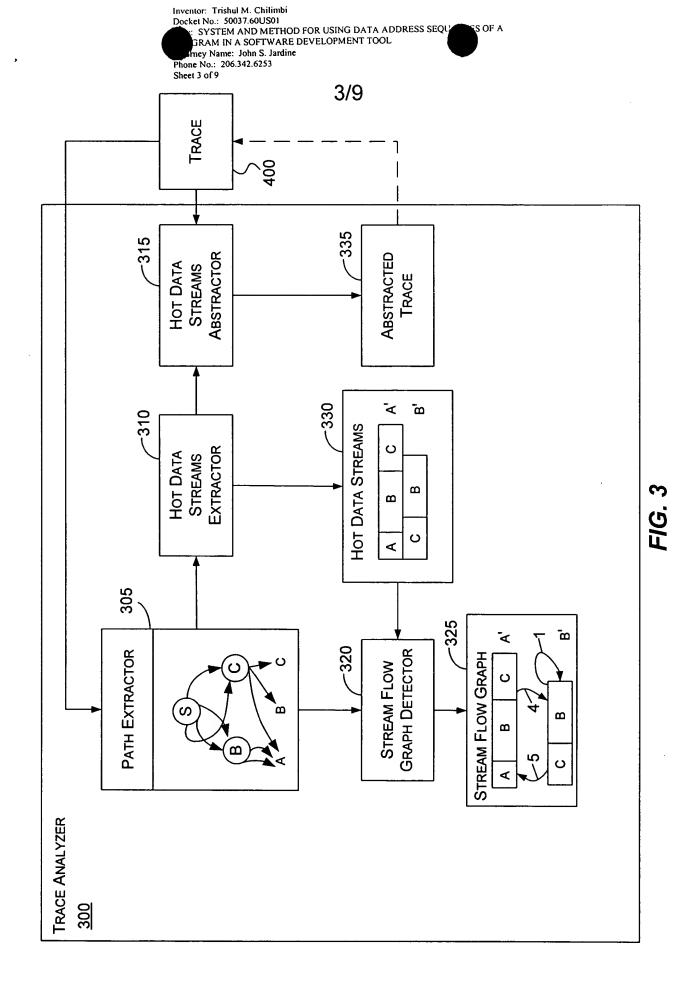


FIG. 2



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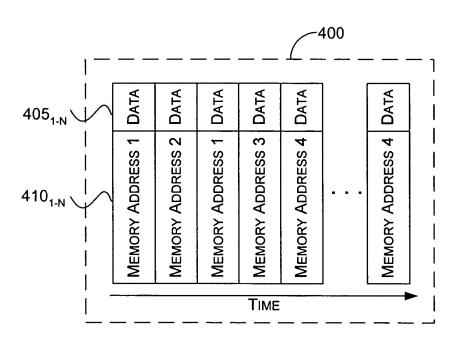


FIG. 4

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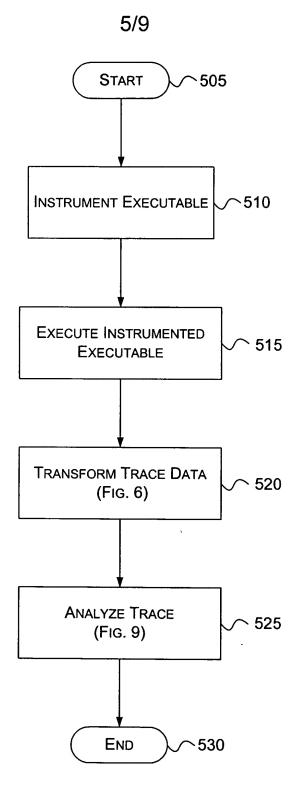


FIG. 5

Inventor: Trishul M. Chilimbi Docket No.: 50037.60US01 SYSTEM AND METHOD FOR USING DATA ADDRESS SEQUENCES OF A GRAM IN A SOFTWARE DEVELOPMENT TOOL ey Name: John S. Jardine Sheet 6 of 9 6/9 **BEGIN** 605 -610 LAST RECORD IN TRACE **RETURN** 615 FILE? Ν **READ NEXT** RECORD IN 620 TRACE FILE 625 Y STACK REFERENCE? No 630 Ν **HEAP** REFERENCE? Υ 635 MAP REFERENCE TO UNIQUE INDENTIFIER INDENTIFYING MEMORY **ALLOCATION THAT WOULD CONTAIN MEMORY ADDRESS WRITE TO** 640 **TRANSFORMED** TRACE FILE

FIG. 6

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OF A

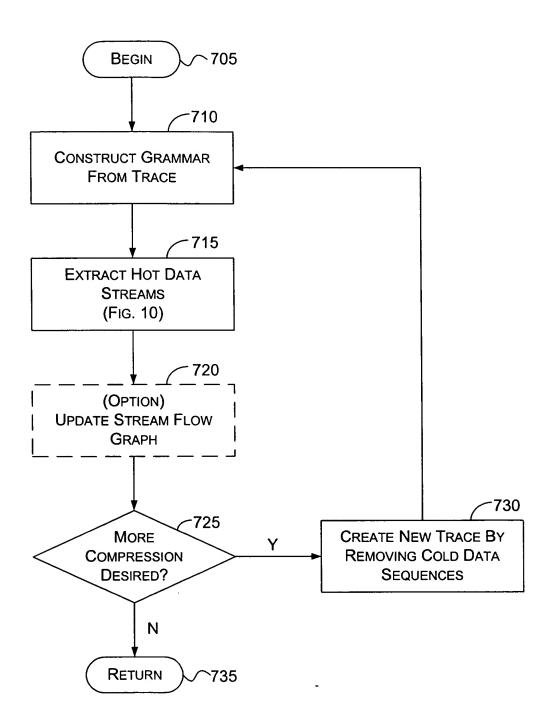


FIG. 7

Docket No.: 50037.60US01 SYSTEM AND METHOD FOR USING DATA ADDRESS SEQU OF A RAM IN A SOFTWARE DEVELOPMENT TOOL ney Name: John S. Jardine Prione No.: 206.342.6253 Sheet 8 of 9 8/9 805 **BEGIN CONSTRUCT A SEQUENCE** OF CONSECUTIVE DATA 810 **ACCESSES FROM WPS** 815 ANY Ν **SEQUENCES RETURN** 820 LEFT? Υ DETERMINE IF COST OF **ACCESSING DATA IN** 825 **SEQUENCE IS GREATER** THAN THRESHOLD - 830 Ν **GREATER THAN** THRESHHOLD? Υ MARK SEQUENCE AS **~ 835 HDS** 

Inventor: Trishul M. Chilimbi

FIG. 8

SYSTEM AND METHOD FOR USING DATA ADDRESS SEQUENCES OF A RAM IN A SOFTWARE DEVELOPMENT TOOL y Name: John S. Jardine e No.: 206.342.6253 Sheet 9 of 9 9/9 4 D `FPRINTF(STDERR, "STEPSIZE UNDERFLOW IN RUNGE\_KUTTA\N"); RETURN FALSE; BREAK; HTEMP = SAFETY \* H \* POW(ERRMAX, PSHRNK); H = 9 H > 0.0 ? DMAX(HTEMP, 0.1 \* H) : DMIN(HTEMP, 0.1 \* H )): RUNGE KUTTA\_STEP(W, \*X, H YTEMP1, ERR); ERRMAX = 0.0; FOR (I = 0; I < 4; I++) ERRMAX = DMAX(ERRMAX, FABS (ERR[I] / YSCAL[1])); F(ERRMAX > ERRCON)—
\*HNEXT = SAFETY \* H \* POW(ERRMAX, PGROW); 905-INT I; DOUBLE ERRMAX, H, HTEMP, XNEW H:\DEMO\TEST\INTEGRATE.C F ( ERRMAX < 1.0 ) = YTEMP1 [ \*HNEXT = 5.0 \* HERRMAX /= EPS; \*HDID = H = 0:1 < 4: XNEW = (\*X) + H; IF ( XNEW ++ \*X H = HTRY; FOR (;;) ) =+ X<sub>\*</sub> VALUE ٥  $\triangleright$ 95260 8660 33: NON-HEAP OBJ 5198376 ► HOT DATA STREAM 36 ▼ HOT DATA STREAM 35 : NON-HEAP OBJ 5216952 NON-HEAP OBJ 5216960 NON-HEAP OBJ 5217056 NON-HEAP OBJ 5198128 NON-HEAP OBJ 5217048 NON-HEAP OBJ 5217064 NON-HEAP OBJ 5217072 NON-HEAP OBJ 5217064 NON-HEAP OBJ 5217064 NON-HEAP OBJ 5217064 PREVISTEP INTO BACK ► HOT DATA STREAM 38 ► HOT DATA STREAM 33 ▶ HOT DATA STREAM 37 ► HOT DATA STREAM 34 HOT STREAM INFORMATION CACHE PACKING RATIO 32 CACHE PACKING RATIO 64 SPATIAL REGULARITY/SIZE TEMPORAL REGULARITY -UNIQUE OBJECTS 🗎 DAEDALUS: DRILI **HOT DATA STREAMS** 931~FREQUENCY ADDRESS PROPERTY → HEAT 938 33: 33: 33. 33: 33: 33: NEXT 930 578: 133. 789: 133: 91: 38: 937 915 917

Inventor: Trishul M. Chilimbi Docket No.: 50037.60US01